

Name: _____ TP: _____

Failure to show work on all problems or use complete sentences will result in a LaSalle.

$$* i^2 = -1 \quad i^4 = 1 *$$

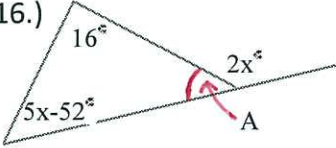
<p>1) Simplify:</p> $-\sqrt{27} - \sqrt{3} - 3\sqrt{12}$ $\begin{array}{c} (-1) \cdot \sqrt{27} - \sqrt{3} - 3 \cdot \sqrt{12} \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \end{array}$	<p>2) Solve:</p> $x = \sqrt{-6 + 5x}$ $x^2 = -6 + 5x$ <p>1. Set equal to 0. 2. Factor 3. Solve twice</p>	
<p>3) Simplify: $\frac{\sqrt{-48}}{\sqrt{-125}} = \frac{\sqrt{-48}}{\sqrt{-125}} =$</p> $\frac{i\sqrt{48}}{i\sqrt{125}} =$ $\frac{\sqrt{48}}{\sqrt{125}}$	<p>4) Simplify: $(-2i)^4$</p> $\begin{array}{c} (-2^4)(i^4) \\ \downarrow \quad \downarrow \end{array}$ $\begin{array}{l} i^2 = -1 \\ i^4 = 1 \end{array}$	<p>5) Simplify: $4i(-2 + 8i)$</p> $\begin{array}{l} i^2 = -1 \\ i^4 = 1 \end{array}$
<p>6) $3i^2(-i^{15})(-5i)$</p> $3 \cdot i^2 \cdot -1 \cdot i^{15} \cdot -5 \cdot i$ $3 \cdot -5 \cdot -1 \cdot i^2 \cdot i^{15} \cdot i$	<p>7) $-4i^2(3i^3)(-5i)$</p> $-4 \cdot i^2 \cdot 3 \cdot i^3 \cdot -5 \cdot i$ $-4 \cdot 3 \cdot -5 \cdot i^2 \cdot i^3 \cdot i$	<p>8) $(9 - 2i)(-4 + 7i)$ FOIL or BOX</p>
<p>9) $(2 - 3i)(2 + 3i)$ FOIL or BOX</p>	<p>10) $(-3 + 4i)^2$ FOIL or BOX</p> $(-3 + 4i)(-3 + 4i)$	<p>11) $(1 - i)^2$</p> $(1 - i)(1 - i)$

$$i^2 = -1$$

PUSH IT TO THE LIMIT.

$$i^4 = 1$$

* $\sqrt[3]{8} = 2$ because $2 \cdot 2 \cdot 2 = 8$

<p>12) What is the sum of $\sqrt[3]{\frac{125}{8}}$ and $\sqrt[3]{\frac{27}{-64}}$?</p> $\frac{\sqrt[3]{125}}{\sqrt[3]{8}} + \frac{\sqrt[3]{27}}{\sqrt[3]{-64}}$	<p>13) Simplify: $\sqrt[3]{250x^3y^5}$</p> $\sqrt[3]{250} = \sqrt[3]{x^3} \cdot \sqrt[3]{y^5}$
<p>14.) Simplify: $5\sqrt{72} + 3\sqrt{6}$</p> $5 \cdot \sqrt{72} = 3 \cdot \sqrt{6}$ $5 \cdot 3 \cdot \sqrt{72} \cdot \sqrt{6}$	<p>15.) Simplify: $\sqrt{-64} \Rightarrow i \cdot \sqrt{64}$</p> <p style="text-align: center;">↓</p>
<p>16.)</p>  <p>Sum of $\angle s = 180^\circ$</p> <p>Solve for angle A.</p>	<p>17.) Simplify $(5\sqrt{7})^2$</p>
<p>18.) Simplify $\sqrt[3]{\frac{54}{216}} = \frac{\sqrt[3]{54}}{\sqrt[3]{216}}$</p>	<p>19.) Simplify: $\frac{5(x^7y)^3}{(5x^9y^4)^2} = \frac{5 \cdot x^{7 \cdot 3} \cdot y^3}{5^2 \cdot x^{9 \cdot 2} \cdot y^{4 \cdot 2}}$</p>
<p>20.) Simplify: $(x^2 - 4) + (x^2 - 4) - (x + 4)$</p> $1x^2 - 4 + 1x^2 - 4 - 1x - 4$ $1x^2 + 1x^2 - 1x - 4 - 4 - 4$	<p>21.) Simplify: $(5 - i)(4 + i)$</p> <p style="text-align: right;">FOIL OR BOX</p>

PUSH IT TO THE LIMIT.